

REMARKS/ARGUMENTS

Claims 1-33 are pending in the application. Claims 1, 4, 19, and 27 have been amended. Claims 34-40 have been added. The Examiner objected to claims 4-5, 19, and 27.

Claims 1 and 10 are amended with an editorial change to clarify that a transducer is *adapted* to excite bending waves in an acoustic radiator.

Claims 1, 10, 20, and 28 are amended to recite the specific requirement that the coupler is adapted to be operatively connected to the acoustic radiator such that bending wave energy is transmitted from the transducer *through the coupler* to the acoustic radiator. Such amendment is supported by Applicant's specification at ¶¶ 0021 and 0024, claim 29, and the Figures.

Claims 4-5, 19, and 27 were objected to as being dependent on a rejected based claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 4 is amended to include the limitations of original claim 1, and claim 5 depends from allowable claim 4. Claim 19 is amended to include the limitations of claims 1 and 11, and claim 27 is amended to include the limitations of claims 1, 11, and 19. The Applicant respectfully submits that amended claims 4-5, 19, and 27 are in condition for allowance.

In view of the foregoing amendments, as well as the following remarks, the Applicant respectfully submits that this application is in complete condition for allowance and request reconsideration of the application in this regard.

Claim Objections

The Examiner objected to claim 11 under 37 CFR 1.75(c) as being of improper dependent form for failing to limit the subject matter of a previous claim. Claim 11 reads: "The

transducer assembly of claim 1, further comprising an acoustic radiator adapted to support bending wave vibration.” This is an additional element that is not included in claim 1. Although claim 1 makes reference to an acoustic radiator, the acoustic radiator is not a claimed element in claim 1. Rather, the recitation of an acoustic radiator in claim 1 is part of functional language that describes the transducer: “a transducer *adapted to excite bending waves in an acoustic radiator to produce an acoustic output.*” It is acceptable to define part of an invention in functional terms. *See* MPEP § 2173.05(g). The functional language serves to define the transducer, but does not claim an acoustic radiator.

The reference to the acoustic radiator in claim 1 does not have the effect of claiming an acoustic radiator, and in claim 11 the element of an acoustic radiator is claimed in addition to the elements of claim 1. Accordingly, claiming the acoustic radiator in claim 11 further limits the subject matter of claim 1, and claim 11 is in proper dependent form.

Claim Rejections – 35 USC § 102

The Examiner rejected claims 1 and 11 under 35 USC § 102(b) as being anticipated by An (U.S. Patent No. 6,466,682). Independent claim 1 as amended recites a coupler “adapted to be operatively connected to the acoustic radiator to transmit bending wave energy from the transducer through the coupler to the acoustic radiator.” In contrast to amended claim 1, An discloses a magneto-rheological fluid 21 positioned between a yoke 15 and a plate 20 (not the vibrating plate 11). *See* An col. 2, line 65-66 to col. 3, line 12, and FIG. 3. The Examiner identified the magneto-rheological fluid 21 of An to be the same as the Applicant’s coupler. An’s magneto-rheological fluid 21, however, is not adapted to be operatively connected to An’s vibrating plate 11, and is even disposed on the opposite side of the yoke 15 from the vibrating

plate 11 and cannot be operatively connected to the vibrating plate 11. Further, the magneto-rheological fluid 21 of An is not positioned to transmit bending wave energy from the transducer to the vibrating plate 11, and cannot do so. Instead, its function is to prevent a touching phenomenon at the plate 20 with a damping effect. *See* An, col. 5, lines 9-14.

In order for a reference to anticipate a claimed invention, the reference must teach each and every element in the precise arrangement set forth in the claim. If the reference fails to teach even one of the claimed features, the reference does not and cannot anticipate the claimed invention. Based upon at least the structural and functional deficiencies of the disclosure in An identified in the preceding remarks, Applicant respectfully requests that the rejection be withdrawn. Nor does the An reference render amended claim 1 obvious because, among other reasons, An does not teach or disclose all of the elements of amended claim 1. *See* MPEP 2142.03. Further, to modify An to relocate the magneto-rheological fluid 21 to be operatively connected to the acoustic radiator (vibrating palte 11) would render An unsatisfactory for its intended purpose of preventing a touching phenomenon of the yoke 15 to the plate 20. *See* MPEP 2143.01(V). Finally, An does not suggest the desirability of the claimed invention. *See* MPEP 2143.01(I).

Because claim 11 depends from independent claim 1, the Applicant submits that this claim is also patentable for at least the same reasons as amended claim 1. Furthermore, claim 11 recites a unique combination of elements not disclosed or suggested by An.

Claim Rejections – 35 USC § 103

The Examiner rejected claims 2-3, 6, 8, 10, 12, 18, 21-23, 26, and 28-33 under 35 U.S.C. § 103(a) as being unpatentable over An and Murray (U.S. Patent No. 6,434,237).

With respect to independent claim 10, similarly to amended claim 1, amended claim 10 recites a coupler “adapted to be operatively connected to the acoustic radiator to transmit bending wave energy from the transducer through the coupler to the acoustic radiator.” In contrast to claim 10, An discloses a magneto-rheological fluid 21 positioned between a yoke 15 and a plate 20 (not the vibrating plate 11). *See* An col. 2, line 65-66 to col. 3, line 12, and FIG. 3. For the same reasons stated above with respect to claim 1, the An and Murray references cannot render claim 10 obvious because, among other reasons, An and Murray do not teach or disclose all of the elements of claim 10. Further, to modify An to relocate the magneto-rheological fluid 21 to be operatively connected to the acoustic radiator (vibrating plate 11) would render An unusable for its intended purpose of preventing a touching phenomenon of the yoke 15 to the plate 20. In addition, An relates to a vibration speaker and Murray is directed to an electronic device support, such as for a radiotelephone mount in a car. *See* Murray FIG. 1. There is no suggestion or motivation to combine the references. Yet further, to modify An to relocate the magneto-rheological fluid 21 to be operatively connected to the acoustic radiator (vibrating plate 11) would render An unsatisfactory for its intended purpose of preventing a touching phenomenon of the yoke 15 to the plate 20. *See* MPEP 2143.01(V). Nor do An or Murray suggest the desirability of the claimed invention. *See* MPEP 2143.01(I).

Independent claim 28 as amended recites as part of a method “operatively connecting a coupler including rheological material to the acoustic radiator and to the transducer to transmit bending wave energy from the transducer through the coupler to the acoustic radiator.” For the same reasons that claim 10 is nonobvious over An and Murray, including, for example, that the cited references do not teach or disclose all of the elements of claim 28, claim 28 is nonobvious.

With respect to independent claim 29, claim 29 recites “transmitting bending wave energy from the transducer through the coupler to an acoustic radiator to excite bending waves to produce an acoustic output.” The cited references do not teach or disclose all of the elements of claim 29, and accordingly claim 29 is nonobvious.

The Examiner rejected claims 7, 9, 13-17, 20, 24, and 25 under 35 U.S.C. § 103(a) as being unpatentable over An.

Independent claim 20 as amended recites the coupler “operatively connected to the acoustic radiator and the transducer to transmit bending wave energy from the transducer through the coupler to the acoustic radiator.” For the same reasons that claim 10 is nonobvious An, which lacks, among other things, the coupler operative connection the acoustic radiator and the transmission of bending wave energy through the coupler, claim 20 is nonobvious.

Because claims 2-3, 6-9, and 12-18 depend either directly or indirectly from claim 1, the Applicant submits that these claims are also patentable for at least the same reasons as amended claim 1. Because claims 21-26 depend from either directly or indirectly from amended claim 20, the Applicant submits that this claim is also patentable for at least the same reasons as amended claim 20. Because claims 30-33 depend from either directly or indirectly from claim 29, the Applicant submits that this claim is also patentable for at least the same reasons as amended claim 29. Furthermore, all of such dependent claims 2-3, 6-9, 12-18, 21-26, and 30-33 recite unique combinations of elements not disclosed or suggested by An or Murray.

New Claims

New claims 34-40 recite features neither taught nor suggested by any of the documents of record. Therefore, these claims are submitted to be patentable and allowance thereof is

respectfully solicited. In independent claims 34, 37, and 40 the coupler is recited to be adapted to be mounted, or mounted, to an acoustic radiator. Support for claim 34 may be found, for example, in ¶¶ 0019-0021 and the Figures. Support for claims 35 and 36 may be found at ¶ 0022 and FIG. 2. Support for claim 37 may be found in ¶¶ 0019-0022 and the Figures. Support for claims 38 and 39 may be found at ¶ 0020 and the Figures. Support for claim 40 may be found at the above referenced locations and also at ¶ 0032 and FIG. 12.

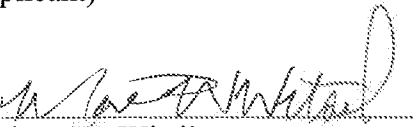
CONCLUSION

In view of the foregoing amendments and remarks, the Applicant respectfully submits that all of the claims in the present application are in condition for allowance. Reconsideration and withdrawal of the rejections and allowance of the claims at the earliest possible date are respectfully solicited. If the Examiner has any questions about the present Amendment or anticipates finally rejecting any claim of the present application, a telephone interview is requested.

Respectfully submitted,

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